

# Asbestos



## Clinical Screening Guidelines for Asbestos-Related Lung Disease

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### Introduction

A physician with expertise in the evaluation and management of asbestos-related lung diseases should screen patients who are now or have been in the past:

- Workers involved in:
  - Mining of asbestos or minerals contaminated with asbestos
  - Manufacturing or using asbestos-containing products
  - Custodial, maintenance and repair work in asbestos-containing buildings, or
  - Direct contact with asbestos-containing waste or dust emissions
- People:
  - Living in the vicinity of asbestos mines and asbestos-related industries such as a vermiculite processing plant
  - In direct contact with asbestos-containing waste or dust emissions

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### Medical history

The medical history interview should include:

- Reason for visit
- Past medical history
  - Include general respiratory, tuberculosis, lung infection and cardiac history, rib fracture, thoracic surgery
- Current respiratory health history
  - Progressive dyspnea on exertion, dry cough, fatigue, weight loss, tachypnea at rest
- Smoking history
  - Include history of past attempts and/or willingness to quit, need for intervention

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**Medical history  
(continued)**

- General asbestos exposure history
    - Any direct contact with asbestos
    - Source, intensity, and duration of exposure
    - Age at first exposure and years since first exposure
  - Occupational exposure history
    - Asbestos and other chemical exposures on the job or from hobbies
    - High-risk occupations such as construction, demolition, remodeling, mining, and shipbuilding
    - Source, intensity, and duration of exposure
    - Age at first exposure and years since first exposure
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**Comprehensive  
physical  
examination**

The physical exam should include:

- Auscultation of heart and lungs
  - End-inspiratory basilar rales
  - Abdominal examination
  - Extremity examination (including clubbing, pulses, peripheral edema, and cyanosis)
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**PA chest  
radiograph**

Note that radiological evidence is typically not present until at least 5 years after first exposure. In addition to a clinical evaluation, the use of a B-Reader is recommended for radiographic rating of lung changes. The radiograph reader should look for:

- Pleural changes
    - Thickening and possible calcification of the parietal and visceral lung pleura
    - Benign pleural effusion
  - Interstitial changes
    - Small, irregular opacities in lower lung fields, “ground glass” appearance
    - Diffuse, bilateral interstitial fibrosis
  - Lung carcinoma/pulmonary nodules
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**Simple pulmonary  
function test (PFT  
or spirometry)**

- Include FVC, FEV1, and FEV1/FVC ratio.
- Asbestosis and some diffuse pleural disease may be characterized by restrictive changes. Among smokers, a mixed pattern may be noticed.
- Consider pre- and post-bronchodilator, especially if obstructive component is evident.

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**Criteria for further evaluation**

- If x-ray is normal or inconclusive and exposure history is positive, repeat x-ray in subsequent years as needed. Lateral and/or oblique view recommended for inconclusive pleural changes.
- Consider referring patients with possible restrictive lung disease, significant radiographic or pulmonary function abnormalities, or those with uncertain significance, to a pulmonary specialist for complete pulmonary function tests and further evaluation.
- CT scan: NOT a screening tool; recommended only if exam/PFT results suggest disease but x-ray does not correlate or if findings of uncertain significance are found on chest x-ray.
- CT may assist in differentiating pleural plaques from soft-tissue densities, cancer versus rounded atelectasis.

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Some of the information is from the Minnesota Department of Health's *Clinical Screening Guidelines for Asbestos-Related Lung Disease*

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